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Amendments to the Claims

Please cancel claims 16 and 18. Please amend claims 1, 7, 9, 13, 17, and 19. Please add new claims 22 and 23. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1. (Currently Amended) An apparatus for processing a telecommunication signal, comprising:
 - a first signal processor, including a first multi-channel echo canceller, for performing a signal processing function, including echo cancellation, upon a telecommunication signal and for producing a first processed telecommunication signal, in accordance with a signal processing parameter, including a logical signal indicating whether echo cancellation is enabled on each channel, the first multi-channel echo canceller including a tone disabler circuit for detecting the presence of an echo canceller disabling tone within each channel and for producing said logical signal in response thereto;
 - a first controller connected with the first multi-channel echo canceller for monitoring the value of the ~~logical signal~~ signal processing parameter;
 - a system controller connected for receiving the telecommunication signal, the system controller connected with the first multi-channel echo canceller for transmitting the telecommunication signal to the first multi-channel echo canceller and for receiving the value of the ~~logical signal~~ signal processing parameter from the first controller, the system controller further connected for receiving the first processed telecommunication signal from the first multi-channel echo canceller and for transmitting the first processed telecommunication signal as a transmitted signal including a second multi-channel echo canceller;
 - a second signal processor, including a second multi-channel echo canceller, for performing the signal processing function upon the telecommunication signal, and for producing a second processed telecommunication signal;
 - a second controller connected with the second signal processor for providing ~~[[a]]~~ the ~~logical signal~~ signal processing parameter to the second signal processor;

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the system controller further configured for transmitting the value of the logical signal signal processing parameter to the second controller, and for replacing the transmitted signal with the second processed telecommunication signal subsequent to transmitting the value of the signal processing parameter to the second controller.

2. Cancelled.
3. Cancelled.
4. Cancelled.
5. (Previously Presented) The apparatus of claim 1 wherein said signal processing parameter includes state variables defining the impulse response for each of the channels in which echo cancellation is enabled.
6. (Previously Presented) The apparatus of claim 1 wherein said tone disabler circuit is further responsive to an external control signal from the first controller for independently controlling whether echo cancellation is enabled on each channel.
7. (Currently Amended) A method of operating an echo cancelling system, comprising:
connecting a first multi-channel echo canceller configured to selectively cancel echo in a plurality of telecommunication channels to a multi-channel telecommunication system, the first multi-channel echo canceller further configured to make concurrently available for selection to the plurality of telecommunication channels (i) a plurality of telecommunication signals processed by the first multi-channel echo canceller to produce a plurality of processed telecommunication signals and (ii) a plurality of telecommunication signals unprocessed by the first multi-channel echo canceller;
monitoring a state condition of echo cancellation, including detecting the presence of an echo canceller disabling tone, in each channel; and
producing a logical signal indicating whether echo cancellation is enabled on each channel in response to detecting the presence of an echo canceller disabling tone in each channel;

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indicating the state condition to a system controller;
transmitting the state condition from the system controller to a redundant multi-channel echo canceller;
disconnecting the first multi-channel echo canceller from the telecommunication system; and
connecting the redundant multi-channel echo canceller to the telecommunication system.

8. (Previously Presented) The method of claim 7 wherein the step of monitoring a state condition comprises monitoring whether the processed telecommunication signal or the telecommunication signal unprocessed by the first echo canceller is output on each of the channels.
9. (Currently Amended) An echo cancellation system comprising:
 - a first echo canceller module comprising a first multi-channel echo canceller and a first controller configured for monitoring a state of echo cancellation, including detecting the presence of an echo canceller disabling tone, on each channel, the first controller configured for producing a logical signal indicating whether echo cancellation is enabled on each channel in response to detecting the presence of an echo canceller disabling tone, the first echo canceller module configured to make concurrently available for selection to each telecommunication channel (i) a telecommunication signal processed by the first multi-channel echo canceller to produce a processed telecommunication signal and (ii) a telecommunication signal unprocessed by the first multi-channel echo canceller;
 - a second echo canceller module comprising a second multi-channel echo canceller and a second controller configured for establishing a state of echo cancellation on each channel, the second echo canceller module configured to make concurrently available for selection to each telecommunication channel (i) a telecommunication signal processed by the second multi-channel echo canceller to produce a processed telecommunication signal and (ii) a telecommunication signal unprocessed by the second multi-channel echo canceller; and
 - a system controller configured for selectively connecting the first and second echo multi-channel cancellers to a telecommunication network, the system controller further

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configured for receiving and recording from the first controller an indication of the echo cancellation state, including the logical signal, on each channel and for transmitting to the second controller the recorded state indication such that the second multi-channel echo canceller is established in operation in accordance with the recorded state information when it is connected by the system controller to the telecommunication network.

10. (Previously Presented) The echo cancellation system of claim 9 wherein the first controller is configured to monitor the state of echo cancellation as an indicator of whether the processed telecommunication signal or the telecommunication signal unprocessed by the first echo canceller is output on each channel.
11. (Previously Presented) The apparatus of claim 1 wherein the logical signal is a function of a first parameter produced by the first multi-channel echo canceller in response to the presence of an echo canceller disabling tone within the telecommunication signal and a second parameter produced by the first controller.
12. (Previously Presented) The apparatus of claim 11 wherein the logical signal is produced according to a logical "or" function.
13. (Currently Amended) An apparatus for processing a telecommunication signal, comprising:
 - a processor configured to perform a signal processing function upon a telecommunication signal and to produce a processed telecommunication signal;
 - a switching unit having simultaneous access to the processed telecommunication signal and the telecommunication signal unprocessed by the signal processing function;
 - and
 - logic in communication with the switching unit and configured to cause the processed telecommunication signal or the telecommunication signal unprocessed by the signal processing function to be output by the switching unit in a selective manner; and
 - a controller in communication with the logic, the controller producing a logical signal that is a function of a first logical signal and a second logical signal produced by the processor in response to an echo canceller disabling tone within the

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telecommunication signal, the logical signal being used to cause the switching unit to output the processed telecommunication signal or the telecommunication signal unprocessed by the signal processing function.

14. (Previously Presented) The apparatus of claim 13 wherein the switching unit is a multiplexing switching unit.
15. (Previously Presented) The apparatus of claim 13 wherein the processor is an echo canceller.
16. Cancelled.
17. (Currently Amended) The apparatus of claim ~~16~~ 13 wherein any one of or any combination of the switching unit, logic, or controller comprises software instructions or is composed of software instructions.
18. Cancelled.
19. (Currently Amended) The apparatus of claim ~~18~~ 13 wherein the logical signal is produced according to a logical "or" function.
20. (Previously Presented) The apparatus of claim 13 wherein the processor, switching unit, and logic compose a first echo canceller module, and further comprising:
 - a second echo canceller module; and
 - a system controller coupled to the first and second echo canceller modules, the system controller coordinating operations between the first and second echo canceller modules.
21. (Previously Presented) The apparatus of claim 20 wherein the system controller passes a parameter between the first and second echo canceller modules the parameter being used to selectively output the processed telecommunication signal or the telecommunication signal unprocessed by the signal processing function.

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22. (New) The method of claim 7 wherein the logical signal is a function of a first parameter produced by the first multi-channel echo canceller in response to the presence of an echo canceller disabling tone within the telecommunication signal and a second parameter produced by the first controller.
23. (New) The method of claim 22 wherein the logical signal is produced according to a logical "or" function.

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